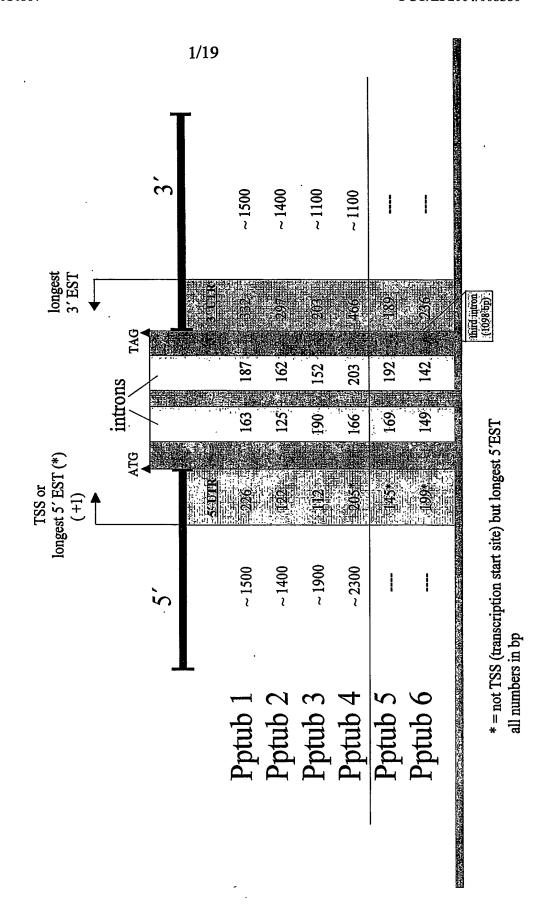
Fig. 1: 8-tubulin genes in Physcomitrella patens



Analysis of expression promoting regions of ß-tubulins in Physcomitrella patens

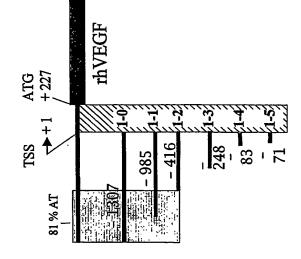
Fig. 2:

TAG 3' VEGET 35S polyA	X 1,5	7	x 3	x 2,5 x 2,5 x 2,5
TSS (+1) ATG S (UIR) T (250) T (250)	150 - 160 -	100 100 100 100 100 100 100 100 100 100	250 500 500 500 500 500 500 600 6	7005
5,	1307 985 416 248 83	- 1075 - 676 - 425 - 245 - 67	- 1274 - 767 - 272 + 53	. 419
1	Pptub 1 1-0 1-1 1-1 1-2 1-2 1-2 1-3 1-4 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5	Pptub 2 2-0 2-1 2-1 2-2 2-3 2-3 2-4	Pptub 3 3-0 3-2 3-2 3-3 3-3	Pptub 4 4-0 4-1

Fig. 3: Analysis of expression promoting regions of Pptub 1 by transient transformation of rhVEGF constructs

										3	/1	9															
SD	19					-	41						12						97						3		
M	165						111						33						8						2		
absolut %	\$	120	173	148	187	148	150	8	56	119	\$	164	4	46	33	4	ಜ	18	9	တ	52	36	29	70	5	0	0
	1-2 a	1-2 a	1-2 a	1-2 c	1-2 c	1-2 c	1-3 d	<u>1</u> 3	1-3 d	1-3 e	— გ. ტ	1-3 е	14 c	4 0	14 c	14 t	4	14 f	1-5 f	1.5 f	1-5 f	1-5 e	1-5 e		delta 35S e	delta 35S e	delta 35S e

SD	\$																		23						34				_		
≥W	113																		212						155						
absolut %	122	8	98	86	309	119	107	88	104	133	66	69	83	88	139	147	78	75	247	197	195	234	18	204	145	129	165	135	144	119	179
	35S a	35S a	35S a	35S b	35S b	35S b	35S c	35S c	35S c		35S d	35S d	35S e	35S e	35S e	35S f	35S f	35S f	1-0 a	10 a	1-0 a	1-0 c	10 c	1-0 c	1-1 a	1-1 a	1-1 b	17 p	1-1 b	1	1-1 d

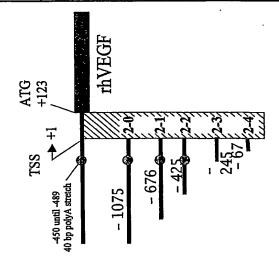


a - f: different transformations
SD = standard deviation
35S mean value (MV)
of each transformation was set to 100%

Fig. 4: Analysis of expression promoting regions of Pptub 2 by transient transformation of rhVEGF constructs

SD	14							83						7					
MV	131	•						26						18					
absolut %	143	115	136	141	110	143	127	69	53	127	66	117	89	- 17	17	16	18	80	34
	2-2 a	2-2 a		2-2 b	2-2 b	2-2 c	2-2 c	2-3 f	2-3 ₺	23 f		2-3 9	2-3 g	24 f	2 4 +	24 f	24 g	24 9	

SD	19												31						77					
MV	100												113						125					
absolut %	113 87	402	19 5	8	8	116	02	120	114	127	26	76	134	82	160	119	192	78	155	132	86	66	137	129
	35S a'	1			35S c	35S c	35S f	35S f	35S f	35S g		35S g	2-0 a			2-0 b	2-0 c	2-0 c	2-1 a	2-1 a	2-1 b	2-1 b	2-1 c	2-1 c



a - b, f and g: different transformations
SD = standard deviation

35S mean value (MV) of each transformation was set to 100%

SD	-												52						69							4 0						15					
\ 	100						•						332						287						- 1	112						37					
abenint %		92	105	118	<u>8</u>	101	94	112	94	93	68	118	293	251	353	387	330	379	231	239	247	399	348	259		138	0	191	44		101	27	9	46	55	20	28
L.	a			35S b							35S e	35S e	3-0 e	ò	Q	þ	3-0 p	Ö	3-2 a				3-2 b			က္	ကု	. ع	ဇှ	ကု	3-3 d	3-4 a	4	4	4	3-4 b	4

TSS ATG +113
-1274 rhVEGF
-767 3-0
-272 3-3
53

a - b, d and e: different transformations
SD = standard deviation
35S mean value (MV) of each transformation was set to 100%

Fig. 5:

Analysis of expression promoting regions of Pptub 3 by transient transformation of rhVEGF constructs

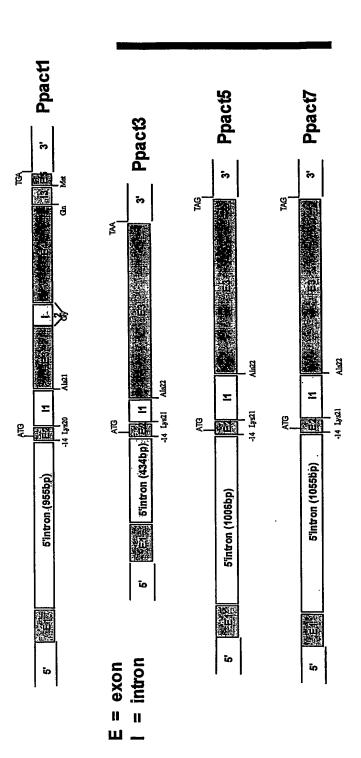
Analysis of expression promoting regions of Pptub 4 by transient transformation of rhVEGF constructs

Fig. 6:

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SD	30						45					œ					
M	100						265					20					
absolut %	63	92	141	0/	. 121	109	290	322	229	210	273	25	22	2	19	30	18
	35S a	35S a	35S a	ł	35S c	35S c	4-0 a	4-0 a	4-0 a	4-0 c	4-0 c	4-1 a		4-1 a		4-1 c	

a and c: different transformations SD = standard deviation 35S mean value (MV) of each transformation was set to 100%



5'sequences resulting from iPCR:

Ppact1: 2973 bp until ATG: 1824 bp promoter / 955 bp 5' intron

Ppact3: 3091 bp until ATG: 2270 bp promoter / 434 bp 5' intron

Ppact5: 3095 bp until ATG: 1909 bp promoter / 1006 bp 5' intron

3069 bp until ATG: 1805 bp promoter / 1055 bp 5' intron Ppact7:

Fig. 7: Genomic structure of Physcomitrella patens actin genes.

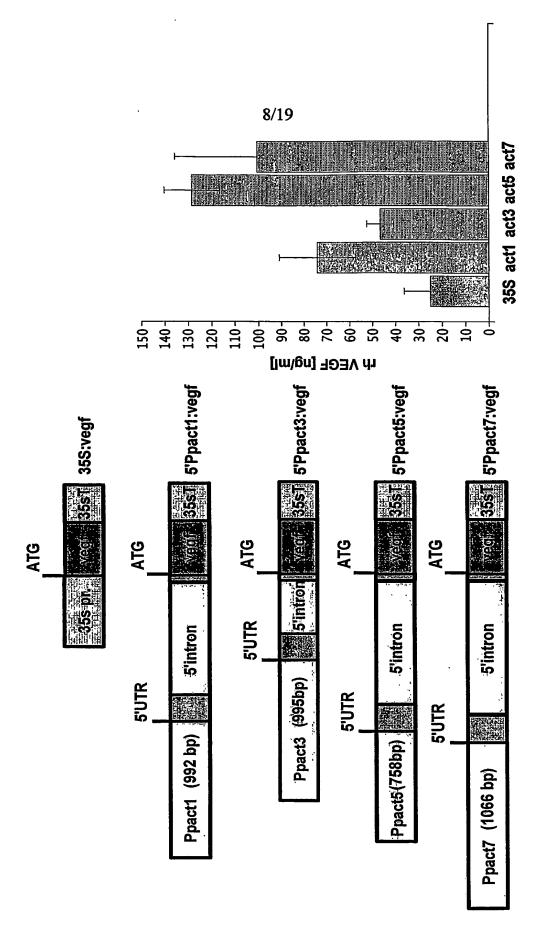


Fig. 8: Comparison of the expression activity of the different 5 actin regions.

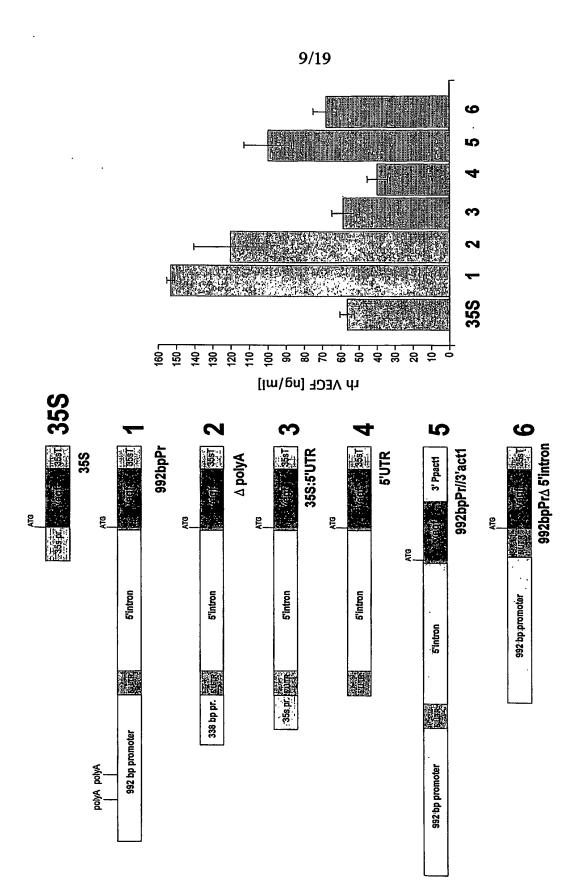


Fig. 9: Ppact1 contructs.

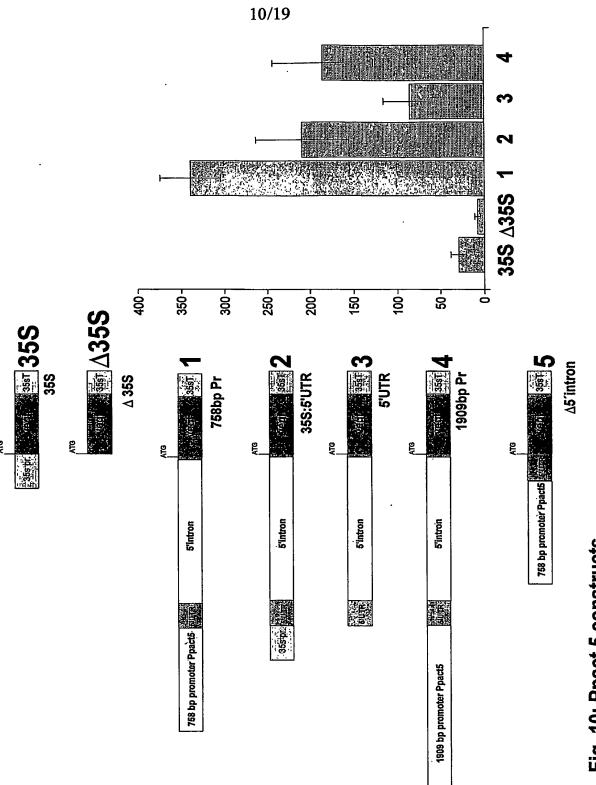


Fig. 10: Ppact 5 constructs.

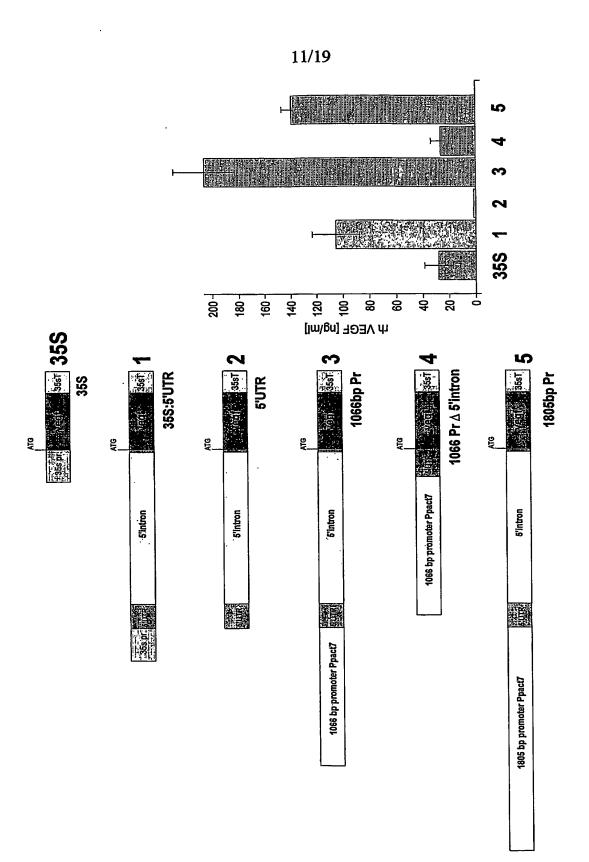
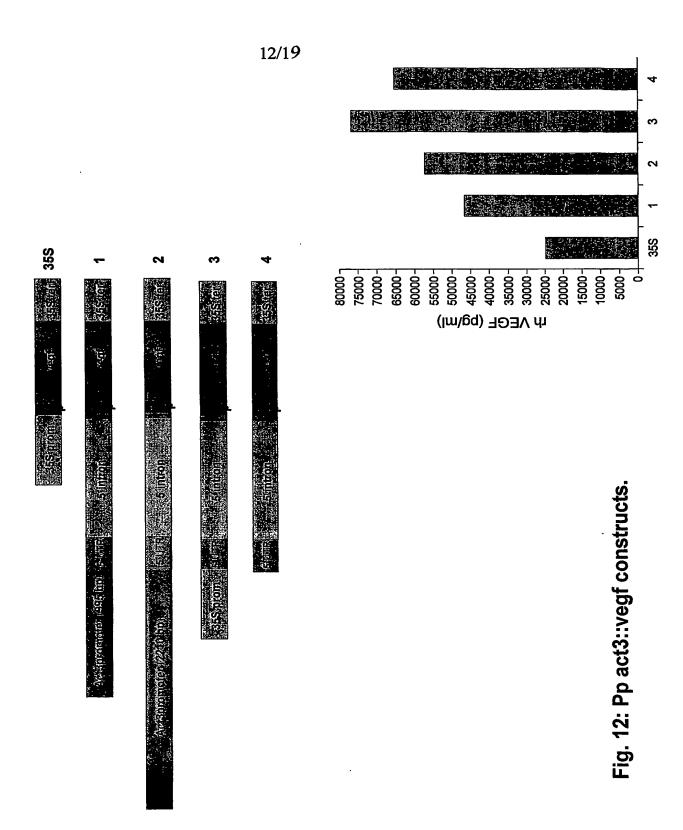


Fig. 11: Ppact 7 constructs.



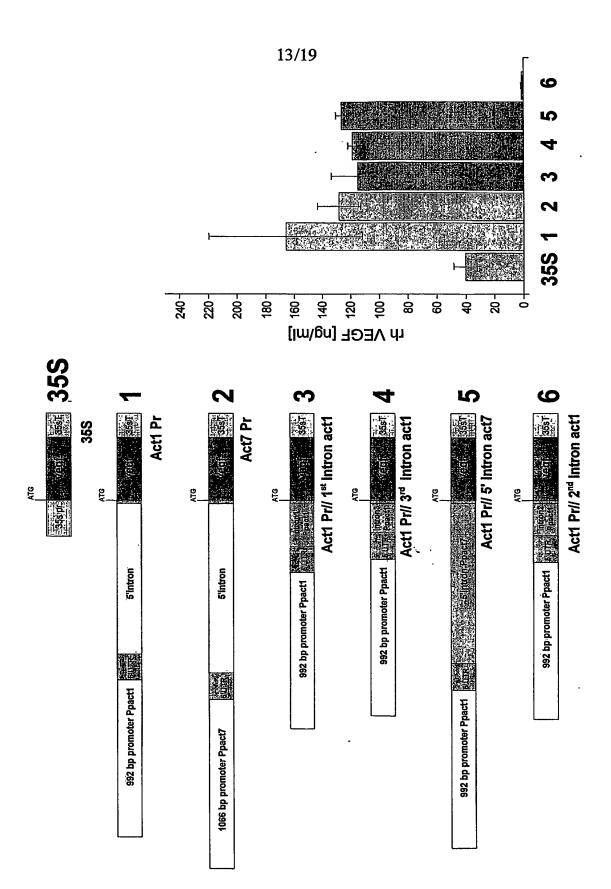


Fig. 13: Ppact1 promoter:5' intron substitutions.

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Fig. 14: Ppact1 promoter:vegf deletion constructs.

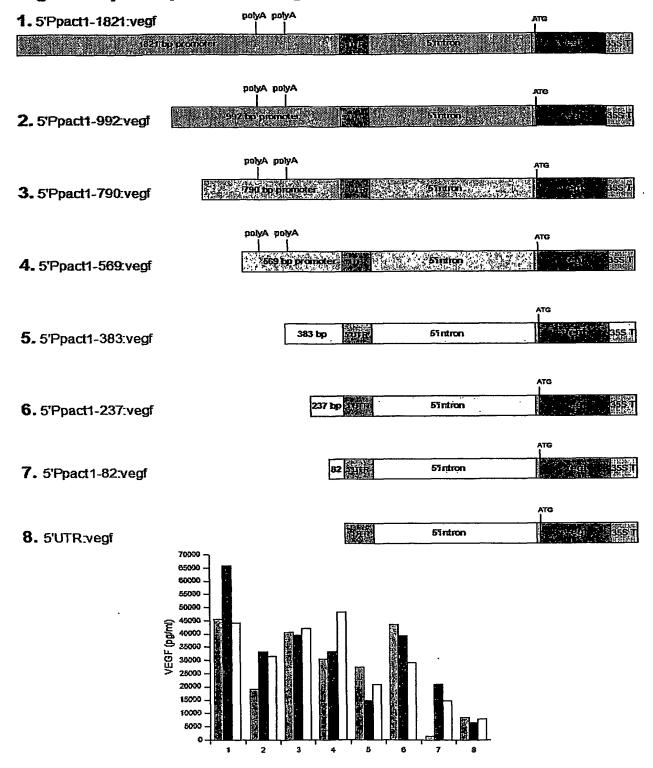
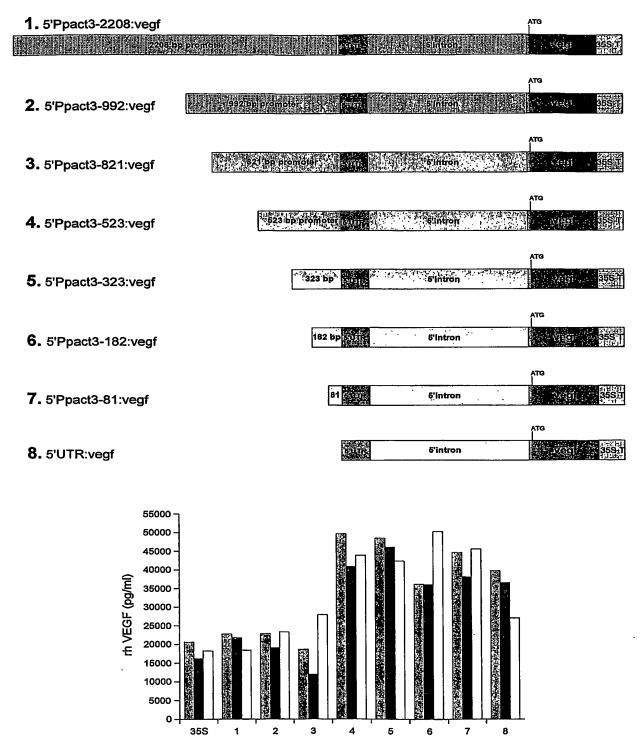
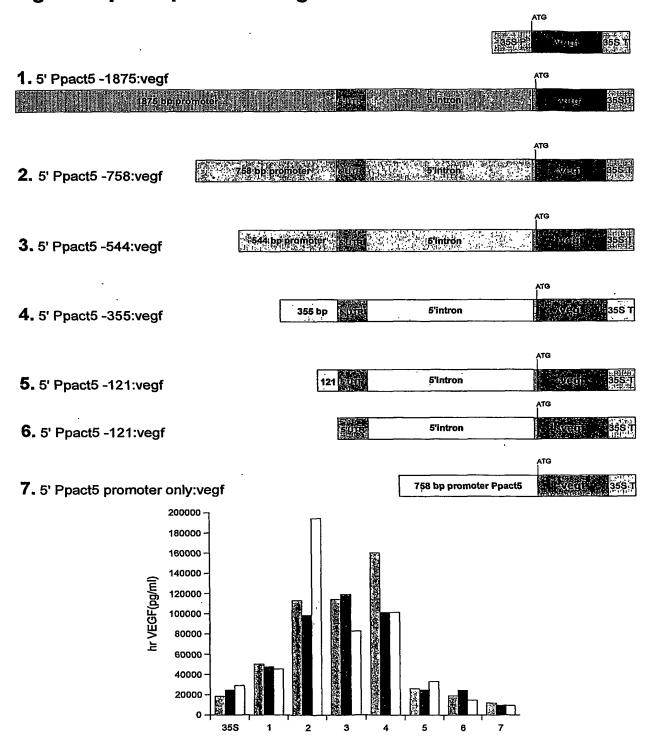


Fig. 15: Ppact3 promoter:vegf deletion constructs.

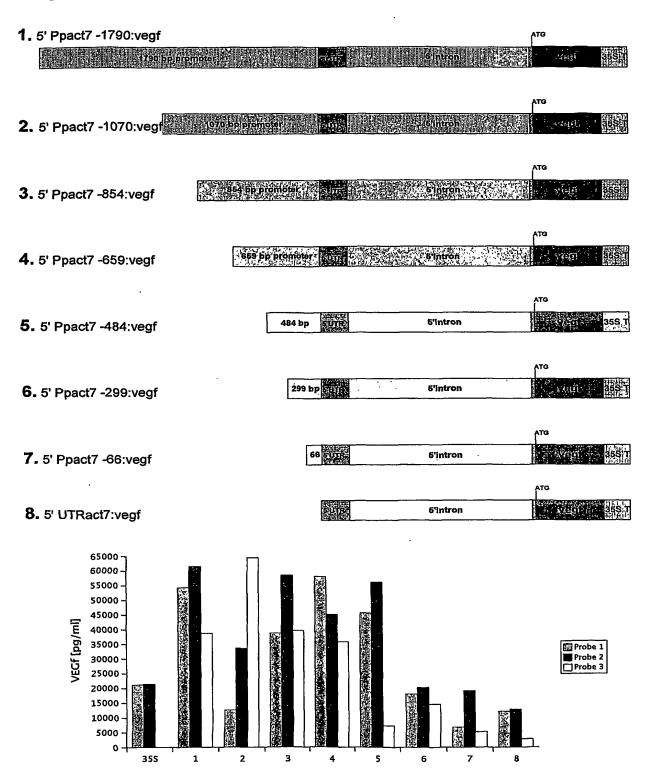


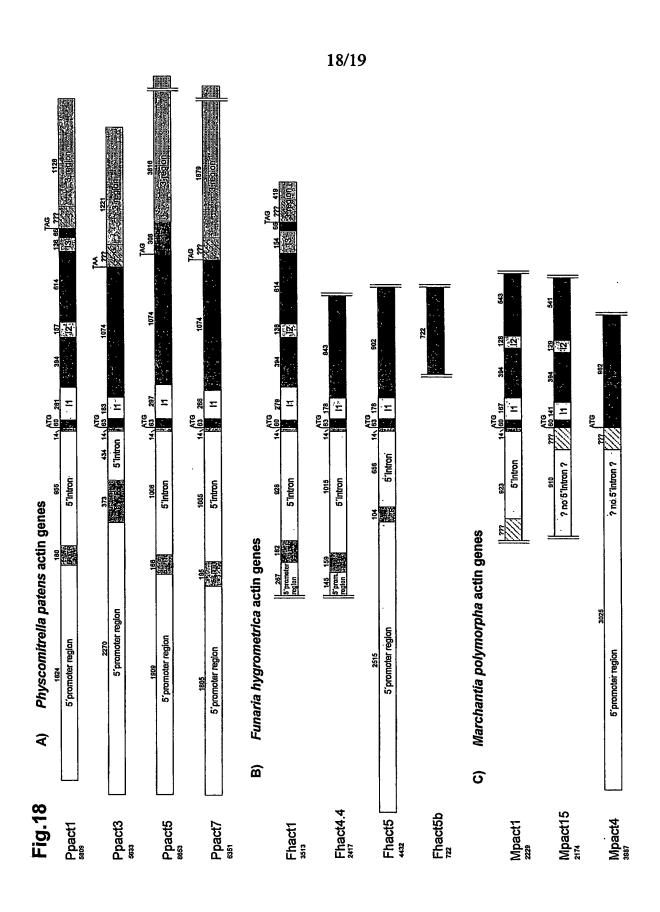
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Fig. 16: Ppact5 promoter:vegf deletion constructs.



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Fig. 17: Ppact7 promoter:vegf deletion constructs.





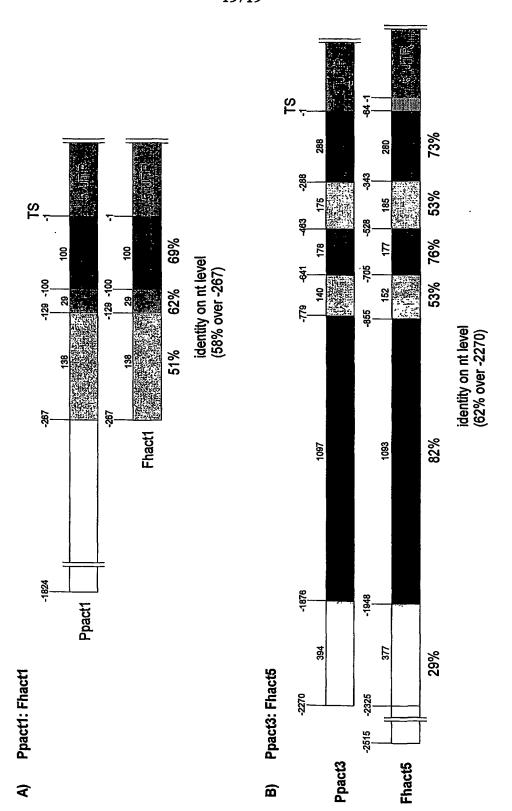


Fig.: 19 Comparison of promoter sequences of homologous actin genes from *Physcomitrella patens* and *Funaria hygrometrica*

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